



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/050,725	01/15/2002	Scott Wade Powell	7090-1-CIP	8845

22442 7590 05/10/2005

SHERIDAN ROSS PC
1560 BROADWAY
SUITE 1200
DENVER, CO 80202

EXAMINER

ZHENG, LOIS L

ART UNIT	PAPER NUMBER
----------	--------------

1742

DATE MAILED: 05/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/050,725

Applicant(s)

POWELL, SCOTT WADE

Examiner

Lois Zheng

Art Unit

1742

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 12 November 2004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after allowance or after an Office action under *Ex Parte Quayle*, 25 USPQ 74, 453 O.G. 213 (Comm'r Pat. 1935). Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on 23 February 2005 has been entered.

Status of Claims

2. Claims 21-22 are canceled in view of the amendment filed on 27 April 2004.
Claims 1, 3, 11 and 13 are amended in view of the amendment.
Therefore, claims 1-20 are currently under examination.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-4, 6 and 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Plantes et al. US 4,329,211(Plantes) in view of Operating Instructions Manual, VortexTM Water Systems, LLC(VortexTM Operating Manual).

Art Unit: 1742

The teachings of Plantés are discussed in paragraphs 5 and 8 of the previous Non-Final Office Action dated 22 January 2004.

However, Plantés does not explicitly teach the claimed less than all of the tabs connected to the power source.

Vortex™ Operating Manual provides proper operating instructions for a Vortex™ water purification system. Vortex™ Operating Manual further discloses a reaction chamber having a housing and a plurality of electrode plates (pages 6, item 10) and the inlet hose to the reaction chamber (page 6, item 9). DC power is used for the Vortex™ water purification system (page 7 paragraph B). Vortex™ Operating Manual further discloses that for high conductivity water, only the first and the last plate in the reaction chamber needs to be connected and the electrical connections varies depending on the various water streams to be treated (page. 9, Electrical Connection).

With respect to claim 1 of the instant invention, it would have been obvious to one of ordinary skill in the art to have selectively connect the tabs of Plantés depending on the type of water streams being treated as taught by the Vortex™ Operating Manual.

In addition, since Plantés teaches using alternating current to treat waste water at high volume flow rates which requires higher voltage and Vortex™ Operating Manual teaches not all of the electrode plate tabs need to be connected to the power source when high conductivity water is being treated, one of ordinary skill in the art would have found the claimed DC power source obvious when treating waste water at flow rates or treating high conductivity waste water where high voltage is not required.

Art Unit: 1742

With respect to claims 2-4, 6 and 8-9 of the instant invention, the rejections are made for the same reason as stated in paragraph 5 of the previous Non-Final Office Action dated 22 January 2004.

5. Claims 5, 10-16 and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Plantes in view of Vortex™ Operating Manual, and further in view of Allen US 5,571,399(Allen).

The teachings of Plantes and Vortex™ Operating Manual are discussed in paragraph 4 above. However, Plantes in view of Vortex™ Operating Manual do not specifically teach the plate tabs having extensions extending through the lower portion of the housing.

The teachings of Allen are discussed in paragraph 8 of the previous Non-Final Office Action dated 22 January 2004.

With respect to claims 5, 10-11 and 15-20 of the instant invention, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Plantes to include tab extensions extending through the lower portion of the house as taught by Allen(Figs 2 and 4, numerals 16-17 and 21-22) in order to increase versatility in tab connection thereby putting electrical connections out of harms way from operators of the apparatus as taught by Allen(see paragraph 8 of the previous Non-Final Office Action).

With respect to claims 12-14, 16 and 18-19 of the instant invention, the rejections are made for the same reasons as stated in paragraph 8 of the previous Non-Final Office Action dated 22 January 2004.

Art Unit: 1742

6. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Plantes in view of Vortex™ Operating Manual, and further in view of Moeglich US 4,176,038 (Moeglich).

The teachings of Plantes and Vortex™ Operating Manual are discussed in paragraph 4 above. However, Plantes in view of Vortex™ Operating Manual do not specifically teach the claimed airlet attached to the lower portion to introduce air within said liquid stream thereby increasing turbulence.

Moeglich teaches a water purification apparatus with processing water augmented by air when the processing water is injected into the lower portion of the processing vessel(col. 2 lines 16-39 and col. 4 lines 24-45).

Therefore, it would have been obvious to one of ordinary skill in the art to have introduced air into the water inlet stream of the processing apparatus of Plantes in view of Vortex™ Operating Manual as taught by Moeglich in order to eliminate the likelihood of bridging and short circuits between the electrodes, and to increase the efficiency of the process as taught by Moeglich(col. 2 lines 20-27).

7. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Plantes in view of Vortex™ Operating Manual and Allen, and further in view of Moeglich US 4,176,038 (Moeglich).

The teachings of Plantes, Vortex™ Operating Manual and Allen are discussed in paragraphs 4-5 above. However, Plantes in view of Vortex™ Operating Manual and Allen do not specifically teach the claimed airlet attached to the lower portion to introduce air within said liquid stream thereby increasing turbulence.

The teachings of Moeglich are discussed in paragraph 6 above.

Therefore, it would have been obvious to one of ordinary skill in the art to have introduced air into the water inlet stream of the processing apparatus of Plantes in view of Vortex™ Operating Manual and Allen as taught by Moeglich for the same reason as stated in the rejection of instant claim 7 in paragraph 6 above.

Response to Arguments

8. Applicant's arguments with respect to claims 1-4, 6 and 8-9 have been considered but are partially moot in view of the new ground(s) of rejection.

With respect to applicant's argument that DC power is not a feasible power source for the apparatus of Plantes, the examiner does not find the argument persuasive since for the same reason as stated in paragraph 4 above.

9. Applicant's arguments with respect to claims 5, 10-16 and 18-20 have been considered but are partially moot in view of the new ground(s) of rejection.

With respect to applicant's argument that there is no fair teaching or suggestion to combine the primary reference Plantes with the secondary reference Allen, the examiner does not find the argument persuasive since proper motivation has been provided in Allen to modified the lower portion of Plantes(i.e. to increase versatility in tab connection thereby putting electrical connections out of harms way from apparatus operators) as stated in paragraph 5 above.

Art Unit: 1742

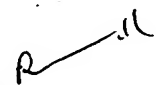
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lois Zheng whose telephone number is (571) 272-1248. The examiner can normally be reached on 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LLZ


ROY KING
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700